

Appl. No. 10/650,210
Reply to Office Action of September 15, 2005

IN THE CLAIMS

Please enter the following amended set of claims:

1-16. (Canceled)

17. (Previously Amended) A method for providing climate cooling to the passenger cabin of a motor vehicle having an internal combustion engine that is selectively started and temporarily stopped, such method comprising the steps of:

sensing selected parameters associated with said motor vehicle;

responding to said selected parameters to selectively operate a compressor motor to thereby operate a compressor when said engine is temporarily stopped so that the climate cooling continues to be supplied to the passenger cabin while the engine is temporarily stopped;

sensing whether cabin cooling is being requested;

if cabin cooling is requested then calculating a period for the engine to directly operate the compressor;

utilizing the engine to operate said compressor for said time period to cool the cabin temperature during said time period;

providing a first control signal when said time period has elapsed, said first control signal allowing the engine to be temporarily stopped and the compressor motor to be operated so that the compressor can provide additional cabin cooling when said engine is temporarily stopped;

sensing when an engine stop is commanded;

monitoring the engine revolutions per minute as the engine is stopping;

providing a second control signal when the engine revolutions per minute fall below a predetermined threshold;

utilizing said second control signal to activate said compressor electric motor;

sensing diagnostics parameters associated with the vehicle;

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determining whether said diagnostic parameters are ~~within acceptable limits, and~~
providing said second control signal only if said diagnostic parameters are within acceptable limits.

18. (Original) The method of claim 17 wherein said engine is restarted if said diagnostic parameters are not within said acceptable limits.

19. (Original) The method of claim 17 wherein said diagnostic parameters include hybrid system fault codes.

20. (Currently Amended) The method of claim ~~16~~ 17 further including the steps of:
monitoring whether an engine restart is commanded;
terminating the operation of said compressor motor in response to said engine restart command;
restarting said engine in response to said engine restart command; and
utilizing said engine to operate said compressor.